PERFICIENT

DETROIT ADOBE EXPERIENCE MEETUP

# Sling RepoInit

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# About Me

- Last name pronounced “Kelso”
- Technical Director at Perficient
- Originally from Michigan
- Worked with AEM since CQ 5.2
- PMC member of Apache Sling

# What do I get out of this?

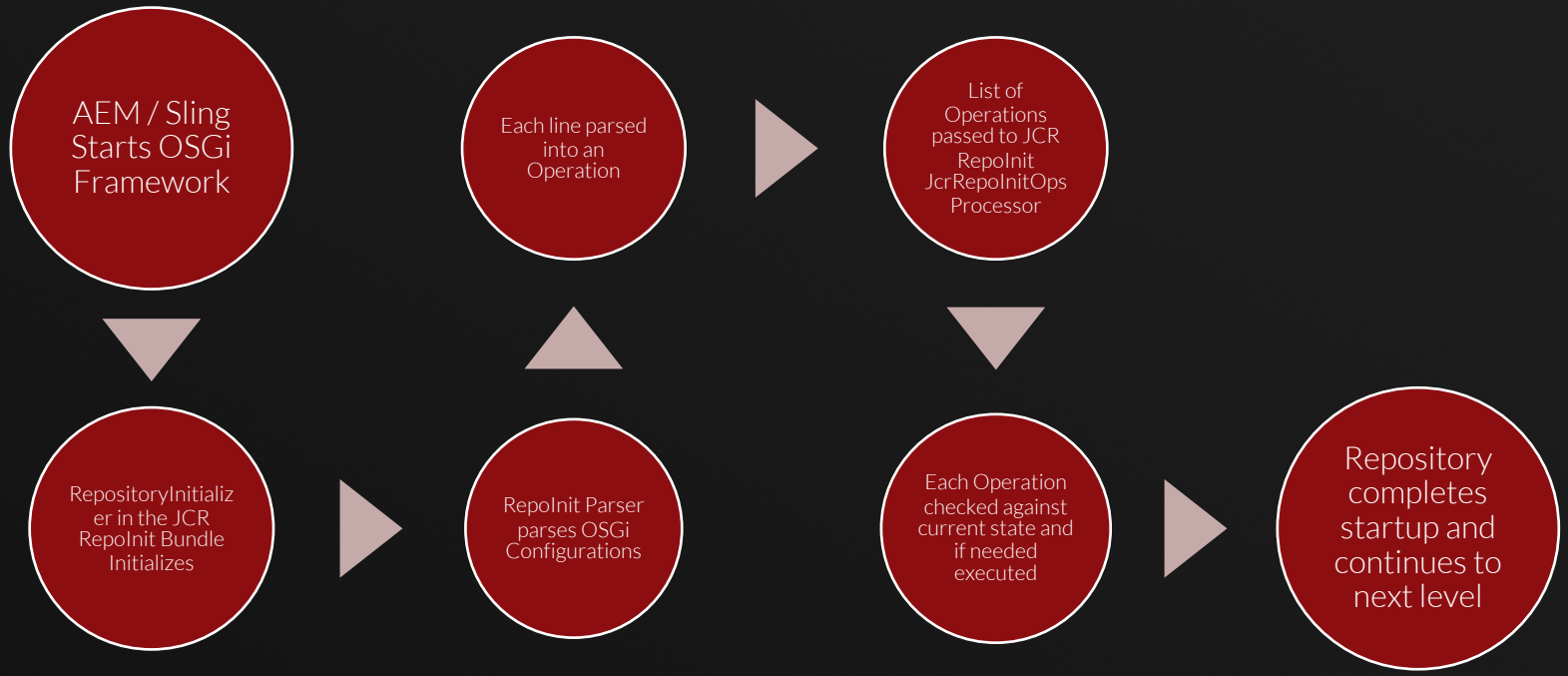
- Introduction to Sling RepoInit
- Sling RepoInit Project Use Cases
- Why Sling RepoInit vs Other Options
- Integrating Sling RepoInit into Your Project
- Tech Preview: RepoInit WebConsole

# What is Sling RepoInit?

Sling RepoInit is:

- Part of the Apache Sling Project
- Used by Sling to initialize the Apache Sling repository in the Provisioning and Feature Model
- *Also* available to projects to further configure the repository
- Implemented as a Domain Specific Language (DSL) with a parser and JCR implementation

# How Does Sling RepoInit Work in a Project?



RepoInit

# Use Cases

# What you can do with RepoInit

Create, Delete, and Enable/Disable:

- Groups
- Service Users
- Users

Set / Remove Privileges

Add Glob Restrictions

Add / Remove Group Membership

Create Resources

Set Properties

Create OSGi Configurations

Create Namespaces

Create JCR Node Types

# Sling RepoInit Use Cases

### Automated Permission Model

- Create Users & Groups
- Assign Group Membership
- Assign ACLs to paths

### Configure Application

- Create Service Users
- Set Service User Permissions

### Initialize Content Structure

- Create paths
- Set node types
- Set / default properties

RepoInit

# Comparing to Other Solutions

# Comparing to Other Solutions

**ACL Packages**

Use ACS AEM Commons or similar to create a Content Package with base content structure and ACLs

**Netcentric AC Tool for AEM**

Open Source tool for managing ACLs via YAML and Content Packages

**Apache Sling Repoinit**

OOTB Apache Sling Repository Initialization

# Comparing to Other Solutions

## ACL Packages

Pro:

- Works on all AEM Versions

Con:

- Difficult to manage initial vs. current state
- Fragile, difficult to maintain

## Netcentric AC Tool for AEM

Pro:

- Works on most AEM Versions
- Run mode support
- Cleans up changed / removed groups
- Configuration stored in consolidated file(s)

Con:

- Requires additional dependencies

## Apache Sling Repoinit

Pro:

- OOTB Feature
- Supports Run Modes
- Configuration stored in consolidated file(s)

Con:

- Only supported in recent versions of AEM and Cloud Service
- Requires additional script to cleanup

RepoInit

# Integrating

# What do I need for Sling RepoInit?

Sling RepoInit* requires AEM 6.5 SP4+ or AEM as a Cloud Service.

* the cool stuff

# Recommended Dependencies

AEM 6.5 includes an older version of Sling RepoInit, recommend installing:

- org.apache.sling.jcr.repoinit – 1.1.24
- org.apache.sling.repoinit.parser – 1.6.2

# Integration Sling RepoInit

- Create OSGi Service Factory Configuration for PID org.apache.sling.jcr.repoinit.RepositoryInitializer, e.g:

```
/apps/myapp/config/org.apache.sling.jcr.repoinit.RepositoryInitializer~myapp.config
```

- Set the scripts property with an array of the operations to execute, e.g.:

```
scripts=[ \
  "create\ service\ user\ myuser", \
  "set\ ACL\ for\ myuser\r\nallow\ jcr:read\ on\ /content\r\nend", \
]
```

- I've also outlined a technique for loading the configurations via OSGi bundle resources here: https://blogs.perficient.com/2020/06/17/one-tool-to-configure-them-all-sling-repoinit/

# Demo

# Sling RepoInit + IMS

## Challenges

- RepoInit does not support Authorizable names with spaces
- IMS only creates groups on login

## Solution

- Use Underscores or Dashes to Separate AEM Group Names in IMS
- Use the AMS Group Sync utility:
  - Create the groups in IMS
  - Synchronize the groups
  - Run the RepoInit scripts

OR

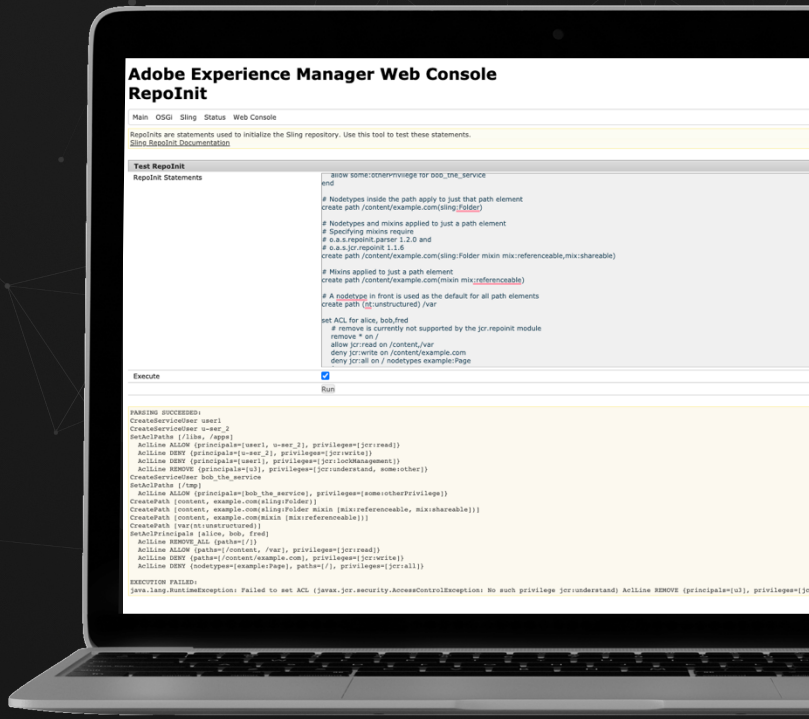
- Add a user to every group and attempt a login

OR

- Use IMS for authentication and AEM RepoInit Groups for authorization

# Tech Preview

RepoInit Web Console



# Try It Yourself

- Update the configuration com.adobe.granite.apicontroller.FilterResolverHookFactory to set org.apache.sling.repoinit.parser to org.apache.sling.*
- Checkout the feature/SLING-9572 branch:

```
git clone --branch feature/SLING-9572 git@github.com:apache/sling-org-apache-sling-jcr-repoinit.git
```

- Build / install the code:

```
mvn clean install -P autoInstallBundle -Dsling.url=http://localhost:4502/system/console
```

- Navigate to: http://localhost:4502/system/console/repoinit

# Resources to Get Started with Sling RepoInit

- Sling Documentation: https://sling.apache.org/documentation/bundles/repository-initialization.html
- More about RepoInit: https://blogs.perficient.com/2020/06/17/one-tool-to-configure-them-all-sling-repoinit/
- RepoInit Grammer: https://github.com/apache/sling-org-apache-sling-repoinit-parser/blob/master/src/main/javacc/RepoInitGrammar.jjt
- RepoInit Logging: Add an INFO logger for the packages:
  - org.apache.sling.repoinit
  - org.apache.sling.jcr.repoinit

# Thanks!

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